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ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2398

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INTERNATIONAL AFFAIRS

CEMA COOPERATION IN LIGHT INDUSTRY DETAILED

East Berlin AW--DDR-AUSSENWIRTSCHAFT in German Vol 10 No 52, 22 Dec 82  
pp 1-2

[Report by Information and Public Relations Department, GDR Ministry for Foreign Trade; edited version of CEMA INFORMATION BULLETIN No 8, 1982: "Purposeful Cooperation in Light Industry Among CEMA Countries"]

[Text] Starting with the CEMA complex program and the long-term target programs for cooperation, the Permanent Commission of the CEMA for the Light Industry concentrated its activities in recent years on the following:

The organization of specialization and cooperation in production;

Supplying the light industry with qualitatively high-grade chemical fiber materials, dyes, lacquers, and auxiliary materials as well as modern machinery and equipment;

The chemical development of the raw material base;

In-depth development of scientific-technical cooperation; as well as

Organization of technical support in the development of the light industry and the wood-processing industry of the Mongolian People's Republic, the Republic of Cuba, and the Socialist Republic of Vietnam.

**Expansion and Strengthening of Production Base**

The execution of a series of multilateral agreements conducted for the period of 1981-1985 is aimed at the better satisfaction of the growing need for light-industry products. These agreements among other things involve the expansion of the production capacities for the manufacture of furniture fabrics, furniture production, the expansion of the production and exchange of selected furniture veneers, as well as the development of qualitative high-grade synthetic furs. The agreement on multilateral specialization and production cooperation in the production of a selected assortment of special furniture articles was signed in 1980. A general agreement, likewise concluded in 1980, calls for the expansion of the capacities for the production of furniture fabrics in the Bulgarian People's Republic, the Socialist Republic of Romania,

and Czechoslovakia, as well as shipments to the Mongolian People's Republic, the Polish People's Republic, and the USSR coordinated on this basis.

The CEMA partners furthermore are orienting their efforts toward organizing specialization and production cooperation relating to the production of non-woven materials, special furniture, furniture veneers, sports articles, toys, and other finished and semifinished products.

During this 5-year term, economic and technical policies will be coordinated by stages in selected branches and production sections of the light industry and, on the basis of the main directions of cooperation between the interested countries, thus coordinated, agreements and treaties will be concluded for the development and in-depth promotion of international specialization and production cooperation in the light industry, the wood-working industry, and the printing industry for 1986-1990.

In order to do a better job in meeting the demand of the CEMA countries for special machines and equipment for the light industry, specialists in that industry together with the CEMA Machine-building Commission drafted proposals for specialization and cooperation in production as well as for mutual shipments of machinery and equipment. Nine agreements were concluded on this basis for the period until 1985 and they cover 745 types of machinery for the textile, leather, and shoe as well wood-working industries. The CEMA Commission for the Light Industry also determined the parameters and technical requirements for the main types of technological equipment for the textile, tricot, shoe, and wood-working industries until 1990 and forwarded these materials to the CEMA Commission for Machine-building as well as the international economic association called Intertextilmash.

Special attention is being devoted to cooperation in the supply of the light industry with raw materials, dyestuffs, and auxiliary materials, whereby the accent is on the increasing chemical development of the raw material base, the more efficient utilization of raw materials, as well as the better satisfaction of the high requirements for chemical fiber substances.

#### Accelerated Development in the Mongolian People's Republic, in Cuba, and in the Socialist Republic of Vietnam--a Main Point in Cooperation

In agreement with the determinations contained in the CEMA complex program and its confirmation by the resolutions, especially of the 30th and 33rd conferences of the CEMA, great significance is assigned to the problems which deal with the gradual approach and equalization of the economic development level of the CEMA countries in all areas and in all concrete forms of cooperation. Accordingly, the CEMA Commission for the Light Industry also oriented international cooperation toward the effort to support the accelerated development of the light industry and the wood-working industry in the Mongolian People's Republic, the Republic of Cuba, and the Socialist Republic of Vietnam. The collaboration program here contains tasks which for the most part are being accomplished on a bilateral basis. This applies for example to the construction of new capacities for the processing of wool as well as the guarantee of complex industrial processing of raw materials of animal origin

in the Mongolian People's Republic. An international team of specialists drafted proposals and recommendations in the Republic of Cuba on questions of animal breeding as well as skinning, processing, and preservation of uncleaned skins, as well as their classification and storage. Specific measures for the development of the leather and shoe industry will be carried out on this basis step by step by the year 2000. That includes the improvements in the quality and utilization of raw hides, the perfection of the technology of leather production, and the modernization of enterprises.

On the basis of proposals from the Socialist Republic of Vietnam concerning multilateral collaboration in the development of its light industry and wood-working industry, the CEMA Commission for the Light Industry arrived at the conclusion to include those complexes in plan coordination which are connected with the construction of enterprises, the increase in effectiveness and labor productivity in the textile industry, the production of textile shoes and sporting goods in the Socialist Republic of Vietnam as well as their shipment to other CEMA countries. Interested CEMA countries are supporting the Socialist Republic of Vietnam also in the creation of a research base for the light and wood-working industries.

#### Concentration of Scientific-Technical Collaboration on Key Problems

One essential pillar in the activity of the CEMA commission is the organization of scientific-technical collaboration. The results of the forecasts for technical development in the textile, tricot, ready-made clothing, leather and shoe, printing, as well as wood-working industries, as worked out in 1977, and the main directions of cooperation until 1990, based on that, were expressed in the plan of scientific-technical collaboration for 1981-1985 in the coordination of the national economy plans, as well as in measures concerning long-term target programs. Scientific-technical cooperation for 1981-1985 is concentrated on the efficient utilization of fuels, energy, and raw materials, as well as the production of highly-productive technologies. Apart from that, no less attention is being devoted to the development and utilization of new materials, the renewal of product assortments, and the greater use of industrial waste, for example, textile waste. Multilateral agreements were concluded for selected problems within the 1981-1985 plan and they cover the entire cycle of science--technology--production--sales. Such agreements exist among other things for the development of an assortment of qualitatively high-grade woollen materials, new types of linen, and tricot products.

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CSO: 2300/209

BULGARIA

RELATIONS BETWEEN BULGARIA, AUSTRIAN ENTERPRISES EXAMINED

Sofia VUNSHNA TURGOVIYA in Bulgarian No 2, 1983 pp 7-11

[Article by Georgi Buyukliev: "Bulgarian-Austrian Economic Relations"]

[Text] Austria ascribes great importance to its foreign economic relations with the socialist countries, including Bulgaria, for the development of its economy. This is based on a number of foreign and domestic economic prerequisites creating favorable conditions for the use of a variety of ways and means for economic, industrial and scientific and technical cooperation among countries with different socioeconomic systems. The policy pursued by contemporary Austria, based on the country's constitutional neutrality, should, however, be accepted with some reservations regarding the possibility of a European capitalist country to pursue consistently and accurately a line of independence from its main Western foreign economic partners. Nevertheless, in the course of the shaping and development of its economic relations with the socialist countries, Austria is generally displaying realism, a constructive approach and an accurate assessment regarding the advantages accruing to its economy from cooperation with the socialist countries.

On the other hand, as part of the group of small highly developed Western European countries, along with sharing the common features and patterns of the capitalist production system, Austria has some specific economic development features. Due to its small population and territory and small domestic market, under contemporary conditions the direct interweaving of intraeconomic with foreign market processes is becoming increasingly important to Austria. Foreign trade is one of the basic factors of economic growth in Austria's economic development. The concentration of its economic potential on a limited number of sectors and production lines, the lack of basic industrial raw materials, energy, etc., create the need for a wide variety of investment commodities and farm and consumer goods satisfied exclusively through exports.

Against this background, Bulgarian-Austrian trade and economic relations have been developing actively over the past few years. The objective prerequisites for this are Bulgaria's reliability as a trading partner, its greater economic and financial possibilities and a strong bilateral legal-contractual base.

The current economic relations between the two countries are governed by the 1973 10-year long-term economic relations agreement and the agreement granting either country the status of most favored nation. An essential feature in the

development of bilateral trade and economic relations was the 1974 protocol appended to the long-term economic relations agreement, which was totally liberalized in the spirit of Austria's freedom of trade policy, with the exception of some so-called "sensitive" goods.

The long-term program for the expansion and intensification of industrial and scientific and technical cooperation between the two countries for 1982-1987, initialled in Vienna in 1982, was a new step in our relations. It proves both countries' wish and aspiration to develop even more active mutually profitable cooperation based on a broad range of sectors and production lines.

The program clearly defines the basic forms, principles and means for bilateral economic cooperation. The program's appendix earmarks in detail reciprocal most promising plans for cooperation.

Austria is one of the few countries with which Bulgaria has signed an agreement for reciprocal encouragement and protection of investments. Also coordinated and endorsed was an agreement on avoiding double taxation on income and property, soon to be initialed. This creates favorable prerequisites for reciprocal capital investments. A number of documents on the departmental and company levels have been initialed, governing bilateral relations in the respective areas -- tourism, transportation, science and technology, etc. The thus established foundations on the governmental and departmental levels favor the development of bilateral economic cooperation and contribute to taking a dynamic qualitative leap in bilateral relations.

The exchange of visits by leading state and economic dignitaries of both countries are of essential significance to the development of economic relations. Let us especially emphasize the exceptionally important contribution which summit meetings, which have developed into a tradition over the past few years, are making to the overall development of relations. Todor Zhivkov, State Council chairman, visited Austria in 1969, 1973, 1978 and 1982. In turn Bulgaria was visited by Federal President Dr Rudolf Kirchschlager in 1976 and Federal Chancellor Dr Bruno Kreisky in 1975 and 1981. These meetings were followed by a number of other visits on the governmental, departmental and business levels. Several joint initiatives were carried out along the line of chambers of commerce and industry, exchange of economic delegations with a view to the further investigation of possibilities for cooperation and their effective utilization, a joint symposium with the Erste Österreichische Sparkasse, with a view to interpreting Ukase No 535 of the Bulgarian State Council of 25 March 1980 and the possibility of its application, etc.

Austria's trade policy toward Bulgaria is determined by its affiliation with the European Free Trade Association and the principle of free trade adopted by this economic group, applicable, with minor exceptions, to all goods.

Austria has introduced value and quality restrictions governing the imports of textiles and ready-made clothing in order to protect its light industry.

Restrictions also exist in importing fresh farm goods, governed by the "triple phase system," based on market requirements and with a view to protecting local producers. Of late the Austrian government has also introduced quality

standards. This hinders even further exports of such traditional Bulgarian goods to Austria because of the new quality grades they introduce, etc.

On 1 January 1975 Austria introduced a system for issuing import licenses by the respective ministries. This creates additional difficulties in importing mainly processed and canned fruits and vegetables. This administrative measure is an effective tool in the hands of the Austrian authorities in controlling the local market and imports.

In accordance with the Austrian system, Bulgaria benefits from the 1 January 1973 General Preferences System without restrictions or exceptions. The overall assessment which can be made of the Austrian preferential system is positive from the viewpoint of Bulgarian trade and political interests. In this sense efforts are being made to ensure the fullest and all possible use of the preferential treatment accorded to us in accordance with the system.

The development of Bulgarian-Austrian trade has been quite dynamic over the past 10 years. It totalled 61,776,000 foreign exchange leva in 1970, reaching 216,632,000 f.e. leva in 1980 and some 220 million in 1982. However, this has been mainly the result of the continuing annual increase in Austrian exports. Bulgarian exports showed a certain decline caused by the elimination of some export items, the redirecting of others as a result of price differentials, the worsened marketing circumstances, particularly in machine building, etc.

Austria held a relatively advanced position in our trade with developed capitalist countries in 1981, accounting for 3.8 percent of exports and 7.7 percent of imports. It is second after Switzerland of the EFTA countries with 19.8 percent of exports and 31.8 percent of imports.

Bulgarian exports to Austria are characterized by a still adverse structure which was the following in 1981:

1. Industrial raw materials and materials, 55 percent;
2. Foodstuffs and agricultural raw materials, 29.2 percent;
3. Light and cellulose-paper industry, 11.6 percent;
4. Machines and equipment, 4.2 percent.

In this respect, the efforts are focused on increasing exports of Bulgarian machines, mainly machine tools with digital programming, conventional and timber processing machines handled by Mashinoexport, which have a good market in Austria, electric and gas-operated lift trucks handled by Balkankarimpeks and Izotimpeks, computers, disquettes and packets.

Some of the most important commodities exported to Austria include metal processing machines, lift trucks trucks, automobile vehicle parts, portable typewriters, metals, chemicals, textiles, electric motors, disquettes, packets, computer equipment, cellulose, furniture, fresh and processed fruits and vegetables, tobacco, honey, and others.

Some of the more important items imported from Austria include complete projects, lifting and sports equipment, agricultural and metal-cutting machinery, medical equipment, electrical engineering systems, various chemicals, lacquers, dyes, printer's ink, special papers and cardboard, a wide range of special steels, consumer goods, and others.

The two mixed companies located in Austria are also contributing to trade increase and diversification: the Rodopakommertz, in food industry and agriculture, and Demand, transportation. During the past 2-3 years they considerably energized their efforts and achieved good practical results.

Traditional good relations exist between the Bulgarian Foreign Trade and Mineral Banks, on the one hand, and Austrian financial and credit institutions, on the other. The Austrian Kontrolbank granted a 15-year easy-term loan to finance the building of tourist projects in Bulgaria. The present favorable credit conditions will apply until the end of 1983. Such credits apply to contracts with the Universale Company on building a balneological center in Sandanski, and with the Dopelmayer Company for the building of a cabin lift on Vitosha. Both projects are under construction and will begin regular operations soon. Discussions with several Austrian companies are also under way on the joint construction of a resort settlement in the southern part of the Black Sea, an "Intercontinental"-type hotel complex, a high-quality beer factory and many other projects, which will also be included in this credit.

A credit agreement was signed between the Mineral Bank and a bank consortium headed by Kreditahnstalt-Bankverein in August 1981 on financing the joint construction of major machine building and metallurgical projects in Bulgaria.

Unquestionably, these two investment credit and short- and medium-term commodity credit lines are having and will continue to have a positive impact on the even more dynamic development of bilateral trade.

Production-technical and marketing cooperation between enterprises and companies of both countries have become significantly energized in a wide range of sectors and production lines over the past few years. This has been paralleled by the initialing of a number of general and limited economic cooperation agreements. A cooperation agreement was reached between a group of Bulgarian foreign trade organizations and the Austrian Post-Alpine Company, of the nationalized Austrian industry on the basis of the 1975 general agreement, during the May 1981 state visit by Federal Chancellor Dr Bruno Kreisky to Sofia. It calls for developing mutually profitable economic cooperation in various areas and reaching a balanced trade figure of 8 billion schillings in both directions over a 5-year period. This agreement opens new opportunities for an even more dynamic development of trade and industrial cooperation in the production of a variety of metallurgical and machine-building items.

The June 1982 visit by Comrade Todor Zhivkov to Austria yielded particularly good results in this respect. Specific contracts were concluded during the visit on building a factory for toilet paper in Belovo, the counterpurchase of finished goods of the same value, industrial cooperation in the cellulose and paper, power and other industries with the Vogt Company, a contract for the joint production and marketing of electric-oil radiators with the Vogel and

Noot Company and a contract for increasing the manufacturing under license of Austrian Milde Sorte cigarettes, a new brand, in Bulgaria. Ties with a number of chemical, machine-building, electronics, metallurgical, food and other companies were energized.

The good relations existing between Khimimport and the Hemi Lintz Company led to a limited agreement on trade in chemicals and cooperation in the chemical and pharmaceutical industries. On this basis, every year the two enterprises exchange chemicals and work jointly on the development of new technologies in these sectors. Significant opportunities for cooperation with the Wianova, Egon Wildtschek, Stollack and other companies are becoming possible for the production of external house and road-marking paints, lackers, etc.

Several industrial cooperation contracts are currently being successfully implemented. Positive cooperation is developing with the Aseol Company for joint production and marketing of general-purpose lubricants with the company trademark, the production of "Atomic" skis, Vienna Line sports clothing, etc.

The 10-12 October 1982 Vienna 13th session of the Mixed Bulgarian-Austrian Economic, Industrial and Technical Cooperation Commission gave a strong impetus to the development of bilateral trade and economic relations. At the session both sides positively assessed the development so far of economic relations and earmarked new relevant areas and cooperation projects for the future. The need was also emphasized to ensure the substantial further development of bilateral trade and industrial-technical cooperation through the fuller and active use of objectively existing production and trade possibilities in both countries.

At the session the good cooperation existing between the Transport Machine Building DSO [State Economic Trust] and the Steier-Daimler-Puch Company led to the initialing of a general memorandum on cooperation in the areas of diesel engines, buses, tractors, electric and gas-operated lift trucks, bicycles, forest industry machinery and others. This general memorandum was concretized also with a limited cooperation contract for the production of various bus models. Talks for cooperation with the companies GFM -- hammer-press equipment; Schember -- automatic face scales; Elin Union -- high-tension equipment and metallurgy; Austria Zeilbannen Export -- cable and rope lines; Vrla and Zumtobel -- fluorescent-light chokes; and Olimpia, Equipex, ADS-Anker-Kassen, Datapoint International, and others -- computer equipment, have reached an advanced stage.

Good cooperation opportunities exist in building joint projects in third countries. New projects in several countries were earmarked at the session and active talks are underway for some of them.

Bulgaria's tourist industry is particularly interested in the Austrian tourist market. The number of Austrian tourists who visit Bulgaria is increasing steadily. Organized tours included 8,718 tourists in 1979 and 9,757 in 1981.

The Balkanturist GD [Main Directorate] maintains regular relations with the most renowned Austrian companies. Its main partners on the Austrian tourist market are Touropa Austria, Kuoni, Neckermann-Austria, Phoenix and Ruefa.

Good cooperation in this area, a credit line, jointly built projects, the possibility of guaranteed bed occupancy by the Austrian side and payment for machines and equipment with tourist services open new opportunities for dynamic cooperation in this area.

Fruitful cooperation is taking place in the various types of transportation. No problems exist in rail, air and river transportation which could adversely affect the development of cooperation. Trucking presents some problems. Regular talks are held between representatives of the transportation ministries of both sides aimed at broadening and making such cooperation more varied.

Considerable progress has been achieved in the area of bilateral scientific and technical cooperation, in the course of which a number of joint studies on topical subjects were successfully carried out. Of late they have been increasingly focussing on practical problems. A total of 41 joint research topics, coordinated with the tasks of the 8th Five-Year Plan and the nine national programs in the fields of science and technology, were earmarked at the latest sixth session of the Mixed Science and Technology Commission, which met in Sofia in October 1981.

Good interaction exists between the Bulgarian Chamber of Commerce and Industry and the chambers of commerce and industry in the main Austrian economic areas, the Union of Austrian Industrialists and other related organizations. The closest is that between the Bulgarian Chamber of Commerce and Industry and the Austrian Federal Chamber of Industry in Vienna, based on the 1976 Cooperation Agreement. It is expressed in the exchange of economic information, assistance in economic delegation visits, participation in fairs and exhibits, contacts between business circles, etc. Good possibilities exist for active cooperation along the lines of the sections set by the Bulgarian and Austrian chambers. The sections act as mixed chambers of commerce based on the voluntary participation of economic and trade organizations and companies in both countries. Bulgaria regularly participates in the Vienna Autumn Fair, while Austria participates in the Plovdiv Industrial Autumn Fair.

The future development of the Bulgarian economy is directly related to the full application of the principles, aspects and means of the new economic mechanism. This is objectively based on the dynamically quantitatively and qualitatively expanding Bulgarian economy. Bulgaria's sharply increased economic potential, given the scale of the country, and the increased level of our economic diversification set as a main task the comprehensive intensification of the entire range of economic activities. This preserves the dynamism and stability in the development of the Bulgarian economy, offering even greater possibilities of expanding and diversifying trade and economic relations between Bulgaria and Austria, consistent with the overall friendly spirit existing in the development of Austro-Bulgarian relations.

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GERMAN DEMOCRATIC REPUBLIC

PLANS FOR STEPPED-UP CARBOCHEMISTRY DEVELOPMENT OUTLINED

Leipzig CHEMISCHE TECHNIK in German Vol 35 No 2, Feb 83 (manuscript received 20 Oct 82) pp 61-65

[Paper by Rudi Reichardt, Ministry for Chemical Industry, GDR Chamber of Technology (KDT); presented at Second Conference on Carbochemistry, Leipzig, 22-23 September 1982: "Status and Tasks to Increase the Yield of Coal Products for the GDR Economy"]

[Text]Classification of Carbochemistry in the GDR Economy

The fulfillment of the economic plan and the numerous constructive proposals of the working groups from the combines on the specification of the high goals for the Plan Year 1983 testify to the correctness of the decision of the Third and Fourth Meeting of the Central Committee of the United Socialist Party of Germany and demonstrates anew the power of our socialist economy. In this connection the increase of the availability of export products and the reduction of imports are in the foreground since this is the only means of reacting to the US challenge on the world market. We proceed from the fact that the export capacity of our economy can only be increased by attractive scientific and technical achievements.

This statement applies also and particularly to the sector of carbochemistry which under the responsibility of the Ministry for Chemical Industry provides for important areas of our economy with the processing of carbochemical tars and oils in Zeitz, with tar processing in Rositz, processing of synthetic gases from coal in Leuna, the production of carbide or acetylene in Schkopau, Montanwachs in Voelpke and active carbon in Premnitz. With the above mentioned production areas about 8 percent of the raw materials processed in the chemistry industry come from coal, that is may be attributed to almost the only domestic source of primary energy, crude brown coal.

The importance of carbochemistry is emphasized by the fact that nearly two-thirds of the use of primary energy of the GDR is based on domestic crude brown coal. Of the 267 million tons of crude brown coal available altogether in 1981, about 10 percent was thermally refined in the form of briquettes. About 1 percent of the crude brown coal is used as raw material for the production of crude montan wax into blanks.

The thermal refining of coal by the known classical methods of processing gasification, low temperature carbonization and coking leads to the production groups of tars and oils important for carbochemistry and which represent today an important area of this

branch of industry. Precisely these refining technologies show the complexity still existing in the energy and material processes so that the economic decisions on the increase of the capability for these branches of industry do not concern only the chemical industry.

It should also not be overlooked that these methods impose relatively high requirements on the quality of the coals to be introduced such as the briquettability and the pyrolysis behavior.

Besides the described complexity of the energy and carbochemical problems we must take into account the fact that most of the final carbochemical products today can also be obtained on the basis of petroleum. The GDR has an efficient industrial sector in petroleum processing and petroleum chemistry which through the current and the forthcoming investments will reach the international state of the art regarding efficiency of processing of the strategically significant raw material. But it is precisely the strategic importance of the energy carrier petroleum which has to be important 100 percent by the GDR which compels us constantly to strive to optimize the components of the yield of the carbochemical and petroleum chemistry final products, a process which emphasizes clearly the urgency of the development of the industrial branch of carbochemistry.

#### Need and Possibilities of the Further Development of Carbochemistry

The mutual dependence between carbochemistry and petroleum chemistry forces us to weigh the possible and necessary goals in the use of both types of primary energy. Both coal refining processes and petroleum processing always lead to intermediate products which can be used materially and to highly purified carriers of useful energy. The most urgent problem is the component of the types of primary energy which should be used for assuring the fuel requirements, while the problem of the use of hydrocarbons as fuel is plainly to be assigned to energy applications.

The Ministry of the Chemical Industry has taken or introduced measures assuring that the yield of light products of petroleum which amounted to 51 percent in 1980 should be increased up to more than 80 percent by 1990, while prerequisites would include the reconstruction and erection of the necessary plant complexes. Thus a basis would be created for taking into consideration the increasing need for fuels, possibly also with decreasing petroleum processing, and in this connection with the orientation that the carbochemical raw material as far as possible with effective methods should be processed into materially useable products.

At present it is impossible to describe with exact figures the development of the primary energy base of the GDR, but the following trends are inevitable:

- The amount of petroleum available will not increase but tend to decrease.
- The extraction of crude brown coal will be increased up to the possible limits at considerable economic costs.
- The necessary increase of the production of crude brown coal will lead to a deterioration of the quality of the coal after the material aspects because of the mining technology problems.

--It will not be possible to increase considerably the availability of important natural gas above the present level in view of the price trends.

On the other hand we must proceed from the fact that a continuous development of the economy of the GDR as established in the Five Year Plan and based on prognostic considerations should imply an increased need for chemical raw materials. The necessary comparison of the trend of development of our economy must naturally be carried out taking into consideration many specific conditions. The extremely considerable goal on the international market for continuous growth of our capacity in spite of extremely deteriorating and manipulated world market conditions is impeded by an energy and raw material base relatively limited as compared with other countries. Independently of the concrete numerical comparisons we may certainly start from the fact that even, and precisely for the German Democratic Republic, only such methods of material and energy conversion can be used on which the maximum requirements are imposed with regard to efficiency and which have a well-balanced energy and material economy.

In the interest of saving primary energy carriers and raw materials therefore very high requirements must be imposed on the production technology, apparatus and measurement technology organization of processes and plants. The relevant research capabilities and resourceful specialists are available; they must be included in a planned and controlled manner in these missions.

To develop carbochemistry it may be deduced that the goal pre-given in the directives of the Five Year Plan, of increasing the production of carbochemical products with a petroleum equivalent of 7 million tons in 1980 to 11 million tons in 1990 should be implemented according to the following aspects:

- total use of carbochemical raw materials from the existing plants and processes, especially the production line of brown coal tars and oils
- increase of efficiency and yield of specific carbochemical products in the processing of these tars and oils
- preparation of new chemical coal refining methods which are suitable for producing chemical raw materials and useful energies on large scales
- development of methods imposing the minimum possible requirements for the quality of the crude brown coals to be used

This means concretely, besides the stabilization and reconstruction of the existing degassing and gasification plants the systematic pursuit of research and development problems for the production sectors of "production and use of synthetic gas" and "direct coal hydration" and the missions established in the central decisions on the reconstruction and increase of the efficiency in the sector of the production areas of "production of carbide and use of acetylene".

After a thorough analysis of the technical level now existing in the German Democratic Republic and the available strength and means for this purpose, it was established in a decision by the party management that including all the specialists and institutions who could contribute to this sector, by the second semester of 1983 concrete technical

and economic comparisons of variants should be conducted on the basis of economic evaluation criteria. On this basis in 1983 it will also be estimated, with better foundation than before how under the specific conditions of the German Democratic Republic the necessary development of carbochemistry should take place.

In the further considerations I'll be discussing some problems and missions in the individual production sectors.

#### Sector of Production and Extraction of Tars and Oils

In 1981 in the relevant production plants of the VEB PCK Schwedt and the VEB Leuna Works "Walter Ulbricht" from 841,000 tons of tars and oils from the low temperature carbonization plants and brown coal coke production plants 29,000 tons of electrode coke, 57,000 tons of paraffin and 66,000 tons of phenols are produced as typical carbochemical final products. The coupling products occurring included 395,000 tons of fuel components and 138,000 tons of heating oils with partly favorable utilization properties.

Even though from the quantitative point of view as compared with the processing of about 20 million tons of petroleum per year the impression might be given that these products do not have a considerable effect on the raw material structure, the specific importance of such products, such as electrode coke, hard paraffin of high quality and some of the phenol derivatives must be emphasized particularly. The electrode coke produced from brown coal tar pitch is an important basic material for the supply of the VEB Electric Coal Plant of Berlin Lichtenberg, the manufacturer of carbon materials. With regard to the replacement of imports also each ton of this raw material is of economic interest. From the qualitative point of view tar pitch electrode coke has some advantages especially with regard to the trace metal content which justify the conception of a considerable increase of the production of this product as a future prospect.

The production of paraffin from brown coal tars both for special application in the industry of candles and packing, but also as raw material for the production of oxidation paraffin is also an important prospective production area for the GDR including also the technical possibilities of production of paraffin on petroleum base.

There is also a uniform opinion that the production of more special typical materials valuable under the carbochemical aspect, such as pyridine, pyrocatechol, possibly also ketones, can be increased. In this connection we are dealing with methods and products which require considerable material outlay to a great extent, since low concentrations occur in the initial products and special problems of protection against corrosion must be solved. On the other hand the production of these products on the basis of our own raw materials represent the possibility of contributing to a reduction of the imports or an increase of exports. This requirement is reduced by the fact that for example the erection of the corresponding production plant for pyrocatechol from the residue from the phenosolvane extract can be refinanced with a period of amortization of two years.

On the basis of the decision of the Ministry on the development of coal refining the competent institutions of the Ministry of Chemical Industry and those of the

Ministry for Coal and Energy have established a joint development concept which includes basically an increase of the total volume with a change of the yield structure in the sense of a greater component of typical carbochemical products. Thereby the starting point must be that in the pyrolysis of the brown coal briquette both at low temperatures, that is in low temperature carbonization and at higher coking temperatures the liquid products must represent at about 10 percent the smallest component of the product yield, that is the strategy for the improvement of these methods must also take into account the requirements as regards amounts of the main product, the coke.

But the fact that the method for the pyrolysis developed several decades ago imposes high requirements on some quality parameters which from the long-term point of view cannot be assured taking into account the overall requirements for the production of brown coal is even more serious. Here we are dealing with genuine economic optimization considerations.

A third factor which is involved for the further organization of this sector is the fact that the low temperature carbonization plants still operating require a relatively high reconstruction cost to restore them to the capacity levels reached earlier.

Today about 10 million tons of brown coal briquettes are refined thermally. We have never gone below this high level even during the period of economically favorable production and distribution of petroleum. The resulting long operating times of these plants which were built partly in the thirties naturally imply the corresponding consequences for improving the technical level.

We start from the fact that the present level of production of electrode coke maintaining the production level of oxidation paraffin and the qualities of special types of paraffin can be more than doubled. In this optimization process we concentrate on the reconstruction and extension of the tar processing capacity in Rositz, but must also assure the technologically imposed minimum rates of flow for the low temperature high pressure hydration methods in Zeitz.

Important fundamental problems of research and development work which were established in a binding manner in the relevant specifications include the increase of the yield of the target product electrode coke with considerable extension of the processing capacity in Rositz and the inclusion of the previously only partly used Ostelbisch tars for the production of electrode coke and paraffin. To satisfy the economic conditions of the eighties, to achieve more favorable economic results with the existing funds with the most effective application of the raw materials used, we have first referred the general conversion of tar processing to the delayed coking method in a large production unit on the basis of the research work carried out, since a large scale experiment conducted this year in Rositz showed that basically the processing of Ostelbisch tars is possible according to the technologies used there, while however increases of the yield, and on a longer term basis the improvement of working conditions in such plants must be implemented unconditionally. The utilization properties of the electrode coke produced according to the Positz technology are good and can lead to considerable import reductions if all the designed measures are implemented.

An important condition for the processing of tars from pyrolysis processes is purification, referred to the dust or ash content. To this end recently the specialists have carried out important adjustments and on the basis of the completed research and development missions we must assure the economically optimum solutions also with regard to the necessary investments.

The ideas of transferring the coupling products occurring in the processing of tars and oils similarly to the objective in petroleum processing to so-called light products to the maximum possible degree, fractions suitable for fuels is particularly interesting. On the basis of a ministerial decision there are concrete measures on the preparation of suitable technologies in the existing high pressure plants, primarily in the Combine Plant of Boehlen of the VEB PCK of Schwedt. The research and development works needed for this purpose have been introduced.

#### Sector of Production and Use of Synthetic Gas

The production of synthetic gases from natural gas, brown coal low temperature coke and petroleum products has assumed a firm place in the structure of the GDR economy. At present in the GDR about  $600 \text{ by } 10^3 \text{ m}^3$  in the normal state/h mixtures of CO and H<sub>2</sub>, of which about 64 percent of natural gas. A large percentage of these synthetic gases is used for the production of fertilizers, especially in Piesteritz, Schwedt and Leuna. In Leuna now as much as ever the classical technology of gasification of brown coal low temperature coke in Winkler generators is operated for the production of synthetic gas for the synthesis of ammonia and at present is also the object of a long-term reconstruction. Synthetic gas based on natural gas from steam reforming plants is also used as source of hydrogen for refining purposes in petroleum processing. It goes without saying that in connection with the development of carbochemistry we also follow the international trend, especially to achieve a definite increase in chemical products coming from coal through gasification and subsequent synthesis. The reason for this resides mainly in the processability of the wide range of raw materials through suitable gasification methods and the possibility of producing a large number of final products from synthetic gases, as long as suitable and economically compatible synthesis technologies are available.

To develop coal gasification methods generally an attempt is made to achieve high use of the raw material coal. As far as possible the method should be independent of the quality of the coals available. Even in large gasification units a simple and sure technology should be provided and with a high degree of automation the environmental compatibility of such a method should be assured. For the GDR with regard to the extension of the range of the fuels to be used the improvement of the fixed bed pressure gasification method proven satisfactory for many years is provided. Moreover for the relatively extensive occurrence of salt coals a new gasification method is being developed in a controlled manner to satisfy the above indicated conditions and which must be suitable for the application of salt coals. Thus in principle we will also have the possibility of organizing the production of chemical raw materials and fuels through this production area.

Quite consistently with the trend in many industrialized countries, we also start from the fact that the use of synthetic gas must be considered through the key product methanol. Methanol, which today can be produced in modern synthesis plants with high

efficiency, is suitable both as a starting product for organic chemistry and as a basic product for the qualitative extension of the range of fuels. For the conditions of the GDR economy highly scientific tests have been conducted to find the extent to which methanol must be considered as a fuel additive and what developments must be pursued and encouraged to achieve the production of fuels of high quality through the basic product methanol or directly from synthetic gases.

We are aware that much work has still to be accomplished to develop such methods. The idea is primarily to have available methods which can be implemented as fully developed process technology solutions in view of the highly exothermal nature of such processes. Naturally we devote great attention to the core of such modern methods of synthesis, catalyst research, since recently by introducing zeolites as catalysts for the synthesis of organic products it was possible to improve considerably the selectivity and efficiency.

In 1982 we extended the state agreement with the USSR existing already since 1980 on the joint development of coal refining methods with regard to the section of use of synthetic gas. As a result of special technical discussions in the research centers of the USSR in Novosibirsk and Severodonezk we have formulated joint missions which will help both countries to achieve more quickly effective solutions for modern methods of synthesis. Through this cooperation it will be possible for the GDR Chemical Plant Building to achieve new universal system solutions which, from gasification methods to the preparation of synthetic gas up to synthesis as a complete line, can be made available both for the partners of this agreement and also for interested parties from third countries.

Precisely for the synthetic gas line extensive substitution possibilities are available for products from petroleum processing and petroleum chemistry. This concerns all products which can be introduced in the fuel sector, but also for the later developments of the synthesis of special organic basic and intermediate products, such as acetic acid, olefins and such like. Therefore in particular to establish the strategy of use of synthetic gases the parallel development of both industrial branches, petroleum processing and carbochemistry must be taken into consideration. The Ministry of the Chemical Industry in agreement with the State Planning Commission starts from the fact that by gasification of brown coals including the new dust pressure gasification method now being developed for salt coals a considerable increase of products obtained from coal can be achieved for material economy and possibly for the fuel sector. The direct use of methanol in the fuel sector in the form of mixed technologies can have only orders of magnitude of below 500,000 tons per year. Therefore great interest is also aroused by modern methods of synthesis for the production of high quality fuels which can be introduced without special adjustment measures in the fuel sector.

Further we may proceed from the fact that a more effective structure of the production of organic raw materials can be achieved which through the release of acetylene which is still used now for chemical mass products, renders possible a higher degree of refining of this valuable raw material which is partly produced from coal.

## Sector of Direct Coal Liquification

The direct hydration of coals is another method of obtaining mixtures of hydrocarbons and therefore manufacturing products for the fuel sector and for organic chemistry. The method through direct hydration is basically simpler, since less production stages are needed. But the technology is by far more dependent on the quality properties of the raw material coal than is the case in the gasification method. In the German Democratic Republic we have been busy already for several years with the improvement of the coal hydration method, in connection with which we may refer to the data from the large scale technical implementation of these technologies in the Leuna Plants.

In accordance with the experience of other industrialized countries the catalytical high pressure hydration has the priority and a study to find an economic solution suitable for the present day conditions. We have conducted research work in cooperation with the GDR Academy of Sciences for the purpose of allowing possibly also the use of salt coals in such processes. We have built or are preparing the required pilot plants for this purpose. Parallelly to this and together with the specialists of the sector of geology and the brown coal combines we have been employed in selecting suitable coals for a hydration method taking into consideration the possibilities provided in the Republic. In this connection we start from the fact that a compromise must be found between the possibility of economic production of coals and the adjustment of the hydration method to the given qualities of coal. Modern data on the possibilities of preliminary treatment for brown coals can play an important role here.

In the further development of a high pressure hydration method for brown coal the environmentally compatible use of hydration residues represents an important element, while a combination with a modern gasification method can be achieved. There are also proposals to satisfy the hydrogen requirement for a modern carbon hydration plant by combination with a modern dust pressure gasification plant operated on the basis of salt coal. He would then achieve a combined plant for the two new areas of development of carbon refining.

There are also concrete problems for the machine building combines in the development of special equipment corresponding to the state of the art technology for carbon hydration plants, so that the latter would be available in case of a possible application of the method. It is clear that high requirements must be imposed on the chemical plant building to be able to produce modern reactors of the dimensions needed for the exacting process parameters of 300 bars and 450 degrees C.

For this sector also we use the possibility of close cooperation with the USSR. Within the framework of the existing agreement between the governments the use of semi-technical experimental plants with rates of flow of 5 to 75 tons per day is provided for the next few years. An exchange of specialists has already taken place and suitable scientific and technical data has been exchanged regarding some questions of detail in the development of a modern carbon hydration method.

I would also like to mention once again that the catalytical high pressure hydration of brown coals imposes particular requirements on the raw material coal. The requirements for the raw material are indeed not higher than those imposed earlier

for classical coal refining methods. But they do not correspond to the expected trend of quality development in the necessary increase of the brown coal transport to satisfy the needs in primary energy. Along with the specialists of the Ministry for Coal and Energy we will study whether by substitution of coals which are now introduced in other processes it would be possible to obtain the raw materials for coal hydration. In the presence of suitable types of coal the catalytic high pressure hydration of brown coals can lead to satisfactory overall energy efficiencies with high yield parameters. These are requirements which as a whole satisfy our situation with regard to primary energy.

#### Carbide and Acetylene Sector

At the present time the production of carbide in Schkopau and Piesteritz amounts to 1,200,000 tons per year. From them 318,000 tons of acetylene are produced, which allows the GDR to assume a top position for this technology at world level. For the further effective use of this important technology of our chemical industry however reconstructions are needed in these plants with mainly two objectives:

1. Increase of the performance of the carbide furnaces with the decrease of specific consumptions and
2. Increase of the component of use of BHT coke obtained in the GDR itself as a coal carrier to substitute the imported hard coal coke still used at present.

Carbide or acetylene will therefore play a dominant role for the organic intermediate products. In particular acetylene must be released from processes which can already be implemented today by modern economic methods on the basis of cheap raw materials, such as for example methanol. This concerns primarily acetic acid. There are many possibilities of producing from the acetylene released higher and more highly refined products. A key position is assumed here by the butane-butinediol line.

I would like to mention here once again the connection between carbochemistry on one hand and petroleum processing and petroleum chemistry on the other. The problem of later five year periods will be to find optimal economical solutions for the optimum production of such basic chemicals as alcohol, simple olefins on coal base or petroleum chemistry bases. The basic trend of producing more highly refined products from acetylene must already be taken into consideration.

#### Conclusions for the Scientific and Technical Problems of the Current Five Year Period

The analysis of the actual situation and the outline of the prospective objectives has made it clear that during the Five Year Plan we must emphasize with the directives of the Tenth Party Day in the sector of carbochemistry the special concentration of decisive research and development studies. The revision of the specifications at the beginning of 1982 has once again made this fact obvious. The tasks derived from the government mandate on carbochemistry which have already been formulated clearly for 1983 have laid considerable responsibility on the competent combines and research institutes of the Academy of Sciences and the universities. In accordance with the Party and government leadership we have set the target of achieving by the middle of 1983 by intensive research and development work a rise in the state of the art for the

individual sectors of chemical coal refining such that by the end of the year it will be possible to propose decisions on economic scales. To achieve maximum increase of knowledge at that time the most important problem now is to use the existing laboratory and small scale technical experimental plants in an optimum manner, primarily with regard to the adjustment of new methods to the raw material situation existing in the GDR and to establish further semi-technical experimental capacities. An important element is the building of the Carbochemical Technical School of the VEB "Otto Grotewohl" of Boehlen, the Combine Plant of the VEB Petroleum Chemistry Combine of Schwedt.

The Ministry of Chemical Industry has already established in 1979 by creating the Scientific and Technical Center of Carbochemistry in Boehlen the organizational prerequisites for assuring the coordination of the research and development works in this sector. In particular the question is of assuring the collaboration of the institutions of the Ministry of Coal and Energy, the Ministry of Chemical Industry, the Ministry of Heavy Machinery and Plant Building and the relevant institutes of the Academy of Sciences and universities. I would like to express my gratitude here for the fact that so far the necessary collaboration has been implemented with high economic responsibility.

An important stage in the solution of the common problems is to complete the project studies to be worked out by the end of the first quarter of 1983 on the possible development lines of the carbochemical coal refining, therefore primarily the line of gasification and subsequent syntheses and the line of direct hydration of brown coal, considering different target products, but primarily with the real estimate of coal qualities. These project studies will offer the basis for obtaining economic evaluation criteria with comparable scales. Each project of the further extension of carbochemistry will assume dimensions such that serious economic decisions will be involved. Our responsibility consists in the conversion of the investments required for such development areas with maximum effect for obtaining final products with high utilization value and the possibility of good export profits.

In this connection I should like to hail particularly the fact that here and now within the framework of Carbochemistry Technical Commission of the Technical Association of the Chemical Technology of the Chamber of Technology such a discussion meeting is being conducted. We have great esteem for the extra-operational work of the commissions of the Chamber of Technology, which is also manifested by the estimate conducted every year of special abilities for initiative and the recognition related to this. In particular in the problems of coal refining and carbochemistry which must be solved with several ministerial areas, the agencies of the Chamber of Technology can provide valuable help. The capacities for initiative known to us in the sector of the production of pyrocatechol or the better application of the carbochemical intermediate products crude montan wax are good examples of this.

It is my opinion that the present consultation contributes to the real enrichment of the specialized knowledge for all participants so that the prerequisites exist for the common solution of the problems ahead of us, and for which I express my best wishes for success.

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CSO: 2300/219

GERMAN DEMOCRATIC REPUBLIC

**FINNISH STATE OIL FIRM TO REFINER CRUDE FOR GDR**

Helsinki HELSINKIN SANOMAT in Finnish 13 Apr 83 p 31

[Text] Neste has signed an agreement with the East German state oil company, INTRAC [expansion unknown], on the basis of which 200,000 tons of German crude oil will be refined in Finland this year.

The refinery volume covered by the agreement to begin as early as this spring will comprise about 2 percent of Neste's entire refinery operation. This year's crude oil supply will amount to a total of 9.5 million tons.

The agreement will in part compensate for the termination of contract refinery volume directed from Neste to Sweden. In accordance with agreements made with the Swedish state oil company, Svenska Petroleum [Swedish Oil Company], Neste refined nearly a million tons of crude oil for the Swedes in 1980 and 1981. Because of a situation involving an oversupply of oil products, however, the Swedes switched to the spot market and last year Svenska Petroleum no longer continued to contract with Neste for refinery services.

A third of the world's oil-refining capacity is at present shut down and refiners everywhere have had to consider ways of maintaining production. Neste too has been actively looking for new partners to enter into refining agreements with. Feelers had been put out with INTRAC for about a year.

Neste assistant general manager Kai Hietarinta feels that the agreement that has just been signed is a welcome one, although of limited importance. According to Hietarinta, with the aid of refining agreements they can protect refinery employment now, when the domestic demand for oil products is declining. The assistant general manager feels that they may in future agree with East Germany on even larger refinery volumes.

If Neste's hopes are realized, the extended refining agreement signed with East Germany will not be the only one either. According to Hietarinta, negotiations have also been entered into "with bigger companies."

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GERMAN DEMOCRATIC REPUBLIC

DEVELOPMENT OF NUCLEAR ENERGY 'FOR PEACEFUL USE' REVIEWED

Bonn INFORMATIONEN in German No 23, Nov 82 pp 10-12

[ 'Background' report by FRG Ministry for Inner-German Relations: "Twenty-Five Years of Nuclear Energy in the GDR"]

[Text] The first research reactor was put into operation on 16 December 1957 at the GDR Central Institute for Nuclear Physics in Rossendorf near Dresden. At that point, the GDR joined the then 40 countries that wanted to use atomic energy for peaceful purposes. This first step into the atomic age was followed by others: Important milestones were the construction of the first nuclear power plant near Rheinsberg (operational in 1966) and in 1973 the start of the first construction phase at what was then the largest nuclear power plant in the GDR at Lubmin near Greifswald. In 1981 nuclear power plants already provided 12 percent of electric energy production. However, presently there are again also noteworthy delays in the expansion program of nuclear energy production.

Peaceful use of nuclear energy in the GDR is based in principle on the consent of the Soviet Union. Because of the military importance of work in this field, the USSR had initially kept secret its own nuclear research and technology. On 17 January 1955, however, the Soviet Military Council announced its willingness to give to friendly nations scientific and technological support for work in the peaceful use of atomic energy. An agreement on the peaceful use of atomic energy was signed between the USSR and the GDR; in this agreement the USSR assumed, among other things, "the obligation to provide the GDR with a research reactor, to assist with its assembly and to make available appropriate practical knowledge."

The GDR weekly DIE WIRTSCHAFT [The Economy] commented on this agreement in December 1957:

--"On the basis of this help from the Soviet Union the GDR will be spared the costs of its own expensive reactor development work. In addition, this agreement gave us the opportunity to catch up with scientific development much faster than it would have been possible otherwise."

In this connection it must not be overlooked that the GDR was a very attractive partner for the USSR not only because of its extensive uranium deposits--these are until today processed by the Soviet-German company Wismut--but also because of the research potential available in the GDR.

In November 1955 the organizational framework for the use of nuclear energy was created. For that purpose the GDR Council of Ministers decided to create a "scientific council for the peaceful use of atomic energy" whose members were to serve as advisors to the Council of Ministers. It was also decided to establish an "office for nuclear research and technology" (dissolved in 1963) and the "Central Institute for Nuclear Physics".

Construction of the Central Institute at Rossendorf was begun in April 1956. Approximately 20 months later, the research reactor could be put into operation. Initially it had a capacity of 2 megawatt (mw) which was later increased to 8 mw. The reactor uses uranium whose isotope 235 must be enriched to between 10 and 36 percent, as the SED newspaper NEUES DEUTSCHLAND reported in January 1978. The enriched uranium is supplied by the Soviet Union. Prof Dr Barwich, then the director of the Central Institute, explained that "this is especially advantageous because the processing of natural uranium into fuel requires not only expensive machinery but also incredible amounts of electric energy." To this day, therefore, the USSR has within the RGW [Council for Mutual Economic Aid] the monopoly for uranium enrichment and processing.

A research reactor has three main functions: It can be used for research in nuclear physics as well as in the training of nuclear physicists, nuclear chemists, radiation biologists and radiologists, i.e. experts which the GDR needs for the additional expansion of nuclear energy. In addition, the Rossendorf reactor also produces radioactive isotopes which are needed especially in medicine, industry and agriculture. Half of the isotope production of the Rossendorf Institute is today exported by the domestic and foreign trade enterprise Isocommerz GmbH in Berlin (East).

In regard to operational safety the concrete wall, between 1.5 and 2 m thick, is pointed out which absorbs all radioactive rays. According to DIE WIRTSCHAFT of December 1957, "one of the biggest safety factors, however, is the perfected and practice-tested construction of the reactor which practically forestalls any kind of danger to the environment."

The second important stage for the peaceful use of nuclear energy was the construction of the nuclear power plant Rheinsberg (Potsdam Bezirk). This was the first nuclear power plant within the RGW that was built outside the USSR. It became operational in the beginning of May 1966. Its 70 mw capacity is relatively small so that today this plant is used primarily for training purposes. Its equipment is mostly Soviet-made; a part of it is the hydraulic pressure reactor. To the present time, this type of reactor is installed in all other nuclear power plants in RGW countries. Its prototype was tested in the Soviet nuclear power plant Novo Voronezh. There its maximum block size had at that time reached a capacity of 1000 mw. NEUES DEUTSCHLAND commented in May 1966 on the selection of this type of reactor:

--"International development has meanwhile proven that the series of hydraulic pressure reactors recommended to us fully meets the requirements of our national economy because of its good economical performance data and its high degree of operational safety."

This conclusion is obviously drawn even today. The minutes of a meeting at the Zittau Engineering School published in the periodical ENERGIETECHNIK in October 1982 stated that the 440 mw reactors in the GDR: --"result in operating capacity that is above average in international comparisons of hydraulic pressure reactors and better than the capacity of the bituminous coal power plants of the GDR."

The Rheinsberg personnel was trained at the "Joint Institute for Nuclear Research" at Dubna (near Moscow). The GDR is a member of this Joint Institute of RGW countries that was founded in 1956. Its purpose is to make possible scientific cooperation in the field of nuclear physics.

The first nuclear power plant for purely industrial use is currently operating in Lubmin near Greifswald (Rostock Bezirk). Decisive for the selection of this site was certainly the lack of raw materials for coal power plants in the northern parts of the GDR as well as the availability of Baltic Sea water for cooling operations. After a construction time of 6 years, the first block with a capacity of 440 mw was put into operation in 1973. This plant in Lubmin--it is part of the VE Nuclear Power Plants Combine "Bruno Leuschner"--has today a capacity of 1,760 mw which would be sufficient, e.g., to supply electricity for a city of more than 2 million inhabitants. This plant uses hydraulic pressure reactors of the Novo Voronezh type supplied by the USSR whose fuel rods contain uranium 235 enriched to 3.5 percent. The annual uranium fuel consumption per block is given as 14 tons. The rods are supplied by the USSR which also takes back the used rods for refueling or storage.

Expansion of the Lubmin nuclear power plant made it possible for the GDR to increase the share of total electricity production provided by nuclear power from 3.2 percent in 1975 to 12 percent in 1981.

Even though the problem of political acceptance of nuclear power plants does not exist in the GDR, the actual expansion always lags behind original plannings. Before 1960, e.g., plans had been made to install by 1980 nuclear power plants with a capacity of 12,000 mw (actual capacity now: 1,830 mw). By 1970, a nuclear power capacity of 3,000 mw was originally considered necessary (actual 1970 capacity: 70 mw). For the 5-year plan 1981/85 possibilities have obviously also been overestimated. In the beginning of 1981, a doubling of the capacity of the Lubmin nuclear power plant--i.e. an increase by 1,760 mw--was considered possible by 1985. But the actual 5-year plan, passed a short time later, counts on a capacity expansion of only 440 mw; this is made clear by the fact that in 1985 nuclear energy is expected to provide between 12 and 14 percent of the electric energy production, the same as in 1981. The third planned nuclear power plant in the GDR at Stendal will likewise not be completed in the middle of the eighties as originally planned. Construction of this plant was agreed upon with the USSR as far back as 1974, its total capacity is likewise supposed to amount to 3,500 mw. The first construction phase at this plant will at best begin at the end of this decade.

PRIVATE SERVICE UNDERTAKINGS FEWER THAN HOPED

Budapest FIGYEL0 in Hungarian 31 Mar 83 p 4

Interview with Zsuzsanna Lonti, employee of the Office of Wage and Labor Affairs by Csaba Vertes; date and place not specified

Question The hitherto experience with new forms of undertaking within enterprises and cooperatives was summed up by the State Office of Wage Labor Affairs. This time we interviewed SOWLA employee Zsuzsanna Lonti about the most relevant conclusions. First of all which areas were involved in the current research?

Answer The sources of our information were: four enterprises, one research institute, two industrial and two agricultural cooperatives. All of them are located in Budapest and its environment. The topographic selection might appear to be one-sided, but one has to keep in mind that the spirit of enterprise is more vigorous in the large industrial agglomerations than elsewhere.

Question What is the motive force behind such undertakings, individual or enterprise initiative?

Answer Both, yet we have interesting experience about when and who takes the initiative. Individual initiatives are much less characteristic for industrial enterprises than for research institutes. In the former it is rather the employer who presses the creation of business work partnerships (bwp), while in the latter rather the employees are interested, since they have recognized the possibility of well paid moonlighting--which was earlier restricted. In the cooperatives collective initiatives prevail, but an interesting feature of them is that the form of specialized coop group takes precedence over the form of independent business work partnerships, obviously because the cooperative can yield its assets to such a group against proper indemnization.

Question The law does not forbid such transactions even in case of independent business work partnerships...

Answer Only when the bwp meets the requirements of the population in the first place. Moreover one of the conditions of the creation of an independent

bwp is competitive bidding which may greatly increase the rentals, and leases can only be granted for a maximum of five years. Thus people interested in such units have apparently decided that the form of special coop group is more advantageous, since it is simpler and it appears to be safer because of its links with the socialist sector. Besides in this case the financial liability of the members is neither unlimited nor joint.

**Question** In other words the decisive factor is the extent and peril of the risk?

**Answer** It is indeed, to such an extent that the number of the already functioning units is—with some exceptions—surprisingly low in comparison with the actual size of the enterprises or cooperatives involved. Presumably the weighing of the hazards is influenced, for the time being at least, by a certain amount of distrust. Our research proved that the management of enterprises and cooperatives now ever more insist upon the establishment of such new forms of undertaking. On the other hand it seems also clear that the majority of the employees do not sufficiently trust the stability and vitality of these units, nor have they enough confidence in the lasting validity of the laws and decrees which control their operations. They are deterred by the red tape involved in their establishment, they are alienated by the complex tax regulations and the risk of future changes in the tax law. Yet craftsmen, who are much in demand by the population, prefer to earn money by bungling and moonlighting, which is not as safe as legal work, but is not subject to taxation.

**Question** Aside from the reluctance to take risks, the employees probably agree about the rationale of the creation of bwps or specialized coop groups. Those who undertake such tasks are obviously attracted by the chance of higher income. But what kind of considerations are prevailing in the minds of the employers?

**Answer** In the first place they are concerned about keeping their labor force. The earlier means of income supplement, for example moonlighting or employment in a second sphere of activity, have now been complemented by another possibility for people with undertaking spirit to earn much more money. And if the bwp works within the framework of the enterprise, management can account for the wages in the "other expenditures" slot. This entails a certain advantage for the enterprise over other kinds of income supplement, for example overtime wages. Thus the bwp can be used to reduce overtime expenditures and the money thus saved—which according to the earlier regulations formed part of the base wage fund—can now serve for an increase in basic wages or premiums.

Further, the work of the bwp or special coop group provides an opportunity to increase the enterprise's capacity. Thus it represents ways and means to increase production. Moreover expenditure for the growth in output does not bear on the wage account nor does it raise the general wage level. Thence, if management decides to reduce its labor force considerably it can legally grant tax-free wage increases.

And, last but not least, the enterprises have rightly recognized that the work of a bwp or a specialized coop group may reduce outside cooperation. For the bwp can produce things that the enterprise had to purchase before from outside purveyors for much higher prices. On the other hand we have to observe that while in this way the profit of the enterprise grows, the prices of its products will not decline at all. Thus the consumer will not realize that these small undertakings, which work within the enterprises, present certain advantages, although originally this was not a negligible viewpoint either...

**Question** It is not entirely clear how the bwp can increase the enterprise's profits and how it can widen the production capacity of a given company. After all the bwp cannot be obliged to play the role of a "subsidiary enterprise."

**Answer** According to the law it cannot. However there are ways and means to do it. The enterprise or the cooperative exploits the bwp's capacity entirely. And if there still remains unexploited potential, then the enterprise has the right to oblige the bwp to demand special permission--in some cases subject to the payment of a fee—for undertaking paid work for another enterprise. We have to admit that the enterprise's stance is to some extent justified. For it is the enterprise or the cooperative which is ultimately responsible for the operations of the bwp or the specialized coop group. Members are only liable to the amount of their financial share and personal income for the bwp's liabilities. Beyond that the enterprise or the coop is responsible for everything.

**Question** In other words the bwp is nothing else but a kind of paid work undertaking organized in a specific form. The question is to what extent can it serve the provision of the population with goods and services, and whether it can assume the functions of background industry, and ultimately in what measure do these small undertakings comply with the original plans?

**Answer** The enterprises are furthering these forms of small undertaking primarily out of their own interest. They can thus broaden their sphere of activities, are able to place certain tasks in the area of these undertakings and last but not least they can bypass certain prescriptions dictated by the economic regulators. This is an enticing possibility. The conditions established by the economic regulators allow considerably less increase in wages for each unit of growth in output. All this would be understandable and acceptable if we could take advantage of the results of a real entrepreneurial activity, ready to assume the risks and to meet the demands of the population, and to concentrate on reducing the list of goods which are in short supply.

**Question** After all, how much can an individual earn in such small enterprises?

**Answer** An average of 50-80 forint per hour, i.e., the double or triple of the legal hourly net wage for 100 percent output. The starting point of the employer is that members of the bwp expect to earn double the income during

legal work hours, in other words as if they would work overtime on holidays. This hourly wage should also cover taxes, the trade union social insurance and the cost of administration. And since the bwp or special coop group works primarily for its own mother enterprise, management influences the wages through the prices—on the basis of what we have discussed earlier.

Higher wages can of course be reached by an increase in the work output. However the regulating role of the "customer" i.e., the enterprise or the coop asserts itself also in this area. Management can influence the amount of personal income by limiting the work time, although the law allows this in case of the coop groups alone. Certain state enterprises are making a separate contract with the bwp members which sets forth that they cannot work more than 80-100 hours per month. The assignment of work is adjusted to the terms of this contract, always in the hope that work done within the bwp will not affect the output during legal work time.

Question It is rather surprising that from among the forms and alternatives of small undertakings the bwps in the enterprises and the special groups in the coops are eliciting the sharpest controversy.

Answer Why is this surprising? We should take into consideration that most people had welcome the possibility to found bwps. After all people can now achieve what they consider as indispensable, i.e., an additional income in the legal way, instead of bungling and moonlighting that they had done before. Yet others would like to "drive" within the legal work time thus obtaining higher income, and why should we react with apprehension to their stance? These do not understand why remuneration higher in the bwps than elsewhere?

Another strange paradox is that the output of members of the bwps or special coop groups is sometimes the double or the triple of the work norm in the same production line. (In general however a 20 or 30 percent surplus output is more characteristic). This amounts to some extent to a severe criticism of the business enterprises. But it is also a favorable symptom that these new organizational forms have finally mobilized the reserves of human performance, that they prompted the completion of certain fundamental organizational tasks, and thus there is some hope that the work of these small undertakings will stimulate the work morale.

However, aside from all this it is also true that the majority of the bwps and a considerable part of the special coop groups emerged as undertakings which discharge tasks in contrast with the original concept. They do not help meet the demands of the population and they are reluctant to assume the role of a background industry. They are working merely as regular paid work systems that broaden the capacity of the enterprises, but they do this in an organizational structure which helps them bypass the economic regulators.

Question Thus it is questionable whether these forms of undertaking are really rational and whether they are useful for the national economy?

**Answer** It is certainly questionable to what extent such a system of small enterprises whose financing is based on the "softer expenditure forint" rather than the "wage forint" which is subject to much harder conditions is rational and expedient. If by further developing the system of economic regulators, we could create conditions in which all elements of cost would be equally "hard" then the enterprises would eventually handle with more hesitation the demands for the creation of such business work partnerships. But then the conditions of working and earning money during the normal work time would also take another turn.

**Question** And then it would become automatically hopeless to create such enterprises?

**Answer** No, by no means. We would rather expect that in this way a sort of division of labor may develop between the bwp and the enterprise and between the specialized group and the cooperative. Consequently these organizations would not undertake the same tasks as the enterprise or the coop, but would develop activities which are uneconomical if done by the enterprise. This would also comply with the original idea, i.e., that the bwps and the specialized groups help accomplish the task of a background industry and thus they would work for the interests of the people.

12312

CSO: 2500/206

REGULATORS FAIL TO MOTIVATE CONSERVATION, RENOVATION

Budapest NEPSZAVA in Hungarian 27 Mar 83 p 5

/Interview with Adam Juhasz, state secretary of industry, by Laszlo Magyar; date and place not given/

/Text/ Last year we read and heard a great deal about how much heavier Hungarian machines and various other products were than similar Western manufactures. According to the government program approved last year for the economic use of materials and the modernization of technologies, we may save at least 17 billion forints by the end of 1985 if we manage materials more intelligently and with greater understanding.

More than a year and a half have passed since the Ministry of Industry began to work out the government program with the National Planning Office and other ministries or presented to the industrial leaders the untenable nature of the industrial situation. Has there been a measurable change since then? We asked this of Dr Adam Juhasz, state secretary of industry.

/Answer/ Measurable results bear witness to the beginning of a change in outlook. We are now using substantially less material, for example, in the production of corrugated cardboard, heating pipes that are visible in houses, refrigeration pipes and gas cylinders or of the building structural elements of KIPSZER /Light Industry Assembling and Construction Enterprises/. Housewives will find out perhaps this year, or at the latest next year, that the newest gas heaters, kitchen ranges and stoves have been freed of excess weight because we have started to modernize enameling technology.

I have not yet spoken of the castings that have been "made slimmer" nor of many other things, and I also have not described in detail where and how much material savings have occurred among the listed semifinished or finished products. According to preliminary estimates, this program has saved almost 4 billion forints for the economy in 1982 without any deterioration in quality at all. To make use of a comparison, the "slimming down" of these products has been as beneficial as healthy weight reduction for an overweight person. Encouraging as this start may be, we are only at the beginning of the process. Our cast iron radiators, aluminum closing structure, tires and inner tubes are still heavier than necessary.

Question According to the program, we must place emphasis first on rationalization that require little in the way of investments. What is your opinion? Have we already exhausted these possibilities?

Answer We are still far from having done so. To illustrate, let me mention the case of corrugated cardboard or gas cylinders. It is possible to achieve results with relatively small expenditures. We need only look around in the factories, and everyone will come on his own "corrugated cardboard"! Here we should also include raw castings, which in most places is reckoned in kilos and tons. The result is that the mass quantity of the raw casting may exceed the weight of similar products made in developed industrial countries. For this reason we have to make enormous use of lathe as though we were producing iron waste and wastes live work and energy. But here, too, something is beginning to change because--at the initiative of the Ministry of Industry and the National Material and Price Office--some of our factories and consumers are reckoning the semifinished products--depending on the complexity and the production costs of the raw castings--not by weight but by the piece. This will no longer permit waste.

Question We said that modern material management from production planning to commercial marketing is a comprehensive process which includes the modernization of standards and technology and in fact the modification of price ratios and wage policy. Has the complex requirement been realized?

Answer About 10,000 standards are still in effect in Hungary, and among these--according to the Hungarian Standards Office--only several hundred are affected by the program. Some of these have already been modernized, for example, the above-mentioned gas cylinder and certain semifinished aluminum products. Even the name of the program expresses the fact that we need not only material savings but also technological renovation, like, for example, the computerized tailoring in the Szeged Clothing Factory or the "mixed" cutting of adult and children shoes in the shoe industry, for in both cases there is now less waste. The modernization of most technologies is, of course, money-intensive.

The present and contradictory relation of the program and the price ratios could be shown thoroughly only in a separate article. Therefore, let us here only mention that our price system, which is based overwhelmingly on prime cost, and the present economic regulators do not adequately stimulate the majority of the enterprises to modernize their technologies continuously and intensively. We must bear this in mind also in the further development of our economic reform! For the modification of wage policy we found a particularly good example in the shoe industry where the sliding scale of wage ratios may reach 20 percent. Therefore, they recently made rational material management one of the conditions of sliding wages. On this basis, we are counting on the shoe industry's achieving savings of 4 million forints, as an enterprise average. This is not a small beginning for 36 million forints.

Question The government has promised to support with credits those enterprises which work out an effective internal program for the rationalization of their material management. How many enterprises have applied for credit

for this purpose, what do their applications bear witness of, and when will decisions be made in the granting of credits.

[Answer] The question should be put to the Hungarian National Bank or rather to the State Development Bank. But since we, too, have a share in judging the credit requests, we know that the enterprises may apply for 500 million forints in bank credits, and moreover for 200 forints in indirect or direct support. But to our great surprise only 10 enterprises have asked for credit, and these do not even request half of the announced amount of 500 million forints. As is well known, the enterprises submit a balance sheet report to the ministry. Since we will have all of them in hand within a short time, I hope that we will have an answer as to what is behind their attitude--objective obstacles or misinformation. I can now indicate the ministry will stimulate and give incentive to the exploitation of favorable economic possibilities and profitable technological modernizations.

[Question] It is obvious that this great task will require international, above all CEMA, cooperation. We understand that many foreign industrial leaders have visited and held discussions in the Ministry of Industry regarding this matter. What did they agree on?

[Answer] It is true that our program has aroused international interest, and Soviet, GDR, Bulgarian, and also Swedish experts came to study our methods. A very old work relation ties us to the Soviet industrial leaders, and an increasingly fruitful exchange of experiences is being developed with the FRG. All of our foreign guests spoke highly of our program, including the Swedish experts. One of them also added, as pleasantly as he was surprised, it also made him think how intensively the ministries and the other highest authorities deal with this subject. He asked whether the enterprises are adequately interested. This is a fair question.

[Question] It has been said that a cardinal requirement for the success of this great work is that everyone from the worker to the factory manager should personally know precisely what is expected of him. Have we reached this point? And in respect to the mass organizations, in what ways can the trade unions be helpful?

[Answer] To meet the challenge, every enterprise has prepared its own internal program. This is evidence that the collectives in most of the factories clearly see what kind of measures are needed and who must be made responsible for what in the plant. Every factory wants the active cooperation of the trade union. In fact, this help is essential. An important requirement for the offers of work competition is more rational material management, including the renovation work plan. It should be considered whether the quality improvement work methods need to be reformed, including the "work without mistakes!" working system. Strengthening of work and technological discipline, which is one of the conditions of more modern material management, cannot be carried out without the active participation of the trade unions. We are expecting a great deal in consciousness formation in particular from the trade unions. For people to make something their own, they must be conscious of it: modern material management is a question that affects economic export, our international competitiveness and, to put it more simply, our living standards.

DAILIES REPORT RESULTS ON, REACTIONS TO PRICE HIKE POLL

'TRYBUNA LUDU' Report

Warsaw TRYBUNA LUDU in Polish 4 Mar 83 p 2

[Article by Jan Markusz:: "Results of Pricing Poll"; date and location not specified]

[Text] At a press conference which took place on the third of this month at the Price Study Institute, journalists were informed of the results of a public opinion survey conducted by KURIER POLSKI on the subject of possible tax and price increases this year.

Certain price corrections are essential for at least partial market equilibrium. That is the reason for the public opinion survey concept comprising 15 various proposals which were adopted in several variants. It did not have--as was stated by Jan Stankiewicz, assistant manager of the Price Study Institute--the status of a referendum nor a plebescite. As one form of public debate it served solely to probe opinions. The issue of a policy on prices as related to income policy will still be the subject of broad debate--primarily with professional unions.

To date, approximately 8,500 returns have flowed into the Price Study Institute. It is estimated that their total will surpass 9,000.

There were 8,128 questionnaires submitted to statistical analysis, of which 6,888 were valid and correctly completed. Fifteen percent of the replies were regarded as invalid, which in studies of this kind is usually considered as an expression of specific opposition to any price increases whatsoever.

The results of the questionnaire were arranged in succession from 1 to 15 according to "the growing degree of opposition to price changes in individual goods and services."

Assumptions were confirmed that it is still relatively easier to accept individual variants for increases in the price of cigarettes (97 percent of poll respondents); natural coffee (96 percent); in third place was economy in outlays for administration (95 percent); followed by cosmetics (91 percent); durable goods (88.7 percent); gasoline and oil (88.4 percent).

In letters and comments added to the questionnaire, suggestions are often repeated in connection with possible price changes in such merchandise as automatic washers and black-and-white television sets requesting their non-treatment as luxury items, inasmuch as they are already too expensive.

At the other end of the scale--the lowest degree of acceptance--were to be found proposals for an increase in the price of electrical energy (25 percent of the poll respondents expressed opposition); foodstuffs (21 percent) and health and social services (21 percent).

As Dr Jozef Garczarczyk stated, the results of this questionnaire are not representative of a cross section of the whole of society. Indeed, from the standpoint of the number of poll respondents (9,000), it closely approximates the sum of family budgets studied by the Main Office of Statistics [GUS]; this, however, does not reflect fully a cross section of society. To an excessively minute degree (12 percent), it includes the working community; almost completely omitted were the farmers (hardly 2 percent of respondents). On the other hand, the engineering-technological cadre group is numerous, as well as retirees and pensioners.

Together with the questionnaires--as Jan Stankiewicz stated--approximately 750 letters flowed into the Price Study Institute (i.a. from party and union organizations), in which there was no lack of critical remarks, as well as proposals for other solutions. They are treated as an integral part of the questionnaire and suggestions proceeding from them will be found in a special report being prepared by the Price Study Institute.

#### 'ZYCIE WARSZAWY' Report

Warsaw ZYCIE WARSZAWY in Polish 4 Mar 83 pp 1, 6

Article by PAP: "It Was Only a Public Opinion Survey and Not a Plebiscite!; Results of Poll by Price Study Institute; date and location not specified"

Tex] Up-to-date results of the public opinion survey concerning issues of price increases and anti-inflation taxes were presented to journalists at the Price Study Institute.

Dr Jan Stankiewicz conducted the press conference and explained to all that the purpose of this highly controversial poll was an introductory study of public opinion on the subject of intended price increases, and that it should be regarded as an introduction to broader debate on the matter in various communities. It was not a plebiscite but only a public opinion poll.

The Price Study Institute at this moment is concerned only with the numerical tabulation of the survey. It is yet too early for a detailed interpretation. In addition to replies on survey forms, approximately 750 letters were received containing numerous comments not to be found in the format of the survey. The Price Study Institute is studying materials contained in the letters. In the final phase, one finds a study of the report on the survey conducted, on which--as Dr Stankiewicz indicated--the role of the Price Study Institute will end.

Dr Stankiewicz advised that from 21 February to 2 March, a total of 8,500 survey questionnaires arrived at the Price Study Institute, of which 8,128 were treated statistically. Fifteen percent of this amount was regarded as invalid. There were 6,888 valid questionnaires. As Dr Stankiewicz stated, in the questionnaires examined, an increase in prices for cigarettes and coffee aroused the least amount of resistance; economizing in outlays for administration took third place; in fourth place were luxury cosmetics, an increase in the price of gasoline is acceptable in sixth place.

Reimbursement for health and social services provokes the greatest resentment among respondents, as well as increased prices for foodstuffs and an increase in charges for energy.

Another distinction was also made, namely, the separation of questionnaires originating in the working community. To date 828 of them were received. Employees accept the proposals included in the questionnaire in the following sequence:

1. Economy in outlays for administration;
2. coffee;
3. cosmetics;
4. cigarettes;
5. gasoline and oil.

The remainder of the questionnaires originating in the working communities conformed to the general study, that is, an increase in energy, food and reimbursed health care services is least acceptable.

The status of "durable goods" was found in fifth place in the general results, but in the employee poll it was in seventh place. There were complaints that the following goods were incorrectly listed: refrigerators, sewing machines and black-and-white television sets--which in the opinion of respondents are not luxuries.

On the issue of anti-inflationary taxes, many comments poured in. They had to do chiefly with the basis for tax assessment, that is 10,000 zlotys. The proposals were geared to increasing the basis for tax assessment on income to the 12,000 or 14,000 zloty level, or also resorting to income per family member as a basis instead of wages. Many respondents likewise cautioned that this tax can weaken the incentive to work.

Proposals were also sent to impose a one-time tax on those employed in the private sector of the economy outside of agriculture, and to tax annuities and pensions exceeding 15,000 zlotys.

Then Dr Jozef Garczarczyk from the Academy of Economics in Poznan discussed the technique of the poll employed, as well as its degree of participation. According to him, a survey of this type, that is, press mail-in, as used in the world, has a so-called "return" (that is, the quantity of answers submitted) of a maximum of 10-15 percent and a minimum of 3 percent. The Price Study Institute poll will receive the probable minimum "return," that is,

3 percent. Numerically it is, therefore, in the opinion of Dr Garczarczyk, representative. However, it contains distortions.

One of them is limited participation of working communities in the survey (12 percent of replies); in general, there is hardly any opinion from farmers (2 percent). On the other hand, participation by engineers and technicians, as well as retirees, is too large. Among others, retirees certainly overstate the acceptability of price increases for cigarettes, coffee and gasoline.

Another distortion stems from the fact that most (too many) replies came from medium size cities (from 20,000 to 100,000 population), and too little from large cities. Dr Garczarczyk also noted that 15 percent of the questionnaires were regarded as invalid, being nothing more than a protest against all price increases, and the results of the poll should be adjusted by that 15 percent.

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CSO: 2600/569

**INEQUITIES IN WAGE SYSTEM DISCUSSED**

Zagreb DANAS in Serbo-Croatian 8 Mar 83 pp 34-35

[Article by Dr Marijan Korosic: "A False Dilemma: Income or Net Income"]

[Text] The judges of the Constitutional Court of Yugoslavia will solve a part of our altogether muddled and unclear problem of the division of income into consumption and accumulation. The Council of the Federation of Croatian Trade Unions has instituted proceedings whereby it hopes to have the linkage of the growth of personal incomes in organizations of associated labor (as favored by this year's resolution on the country's development policy) thrown out. It is felt that this negates income as the basis of socioeconomic relations.

The initiative of the trade unions is important in several aspects, but if it should get something moving in the present unacceptable system of distribution—it would be worthwhile to rule favorably on that initiative regardless of the form it has chosen, which some people probably do not consider the best. However, other questions immediately pose themselves and not just those which have now been submitted to the Constitutional Court.

**Two Rules**

The trade union, for example, does not even put the question of the character of the resolution on economic policy, which even in the past customarily set the level of personal incomes, which by and large it did inflexibly and unselectively. The resolution has taken on the power of a law, although the procedure required for adoption of a law is not followed in its enactment. Under our constitution it would seem that resolutions are primarily supposed to point up a situation, problems and needs, while the implementation of recommendations (that is, of resolutions) is left to legal enactments, laws, compacts and accords, which enter with a greater sense of measure into the sensitive tissue of the conduct of business and economic activity. Or, another example. It is nothing new for resolutions to index personal incomes to other categories, but this has not always been income. In the 1979 resolution net income also determined the movement of personal incomes. So that the resolution should have been "thrown out" even then either at the time when it was being enacted or, as now, before the Constitutional Court. Of the 15 annual resolutions which we have examined, in only three is it provided that personal incomes are to depend on the growth of income. The others speak about labor

productivity or refer to the provisions of compacts and accords in effect, without fixing the growth of workers' personal incomes. Only now has the trade union made its appearance. Are the problems of distribution clearer now, so that it is reacting in time?

I think that the problems of distribution are not comprehensible to many people, and even if the trade union does win its case before the Constitutional Court, they will still be unclear. There is no essential difference except a minimal quantitative difference between income and net income. In practice, regardless of occasional deviations in resolutions or other enactments, income has been and has remained the principal category to which the personal income of organizations of associated labor has been compared. The rule has been set down: as soon as income per worker is higher in an organization, personal income per worker will also be higher, but not to the degree of the growth of income. And conversely: the lower the income per worker, the lower also the personal income per worker, but not down as far as the income has dropped. Which is why it is a sound opinion among employed persons that "it is not so important how much and in what way you work, but where you work." There is another rule; to be sure, it is not directly raised by the system of distribution, but it is nevertheless an essential characteristic of the system. A rigid pay structure has been established within organizations of associated labor, one which is pejoratively termed "leveling." Inequalities from branch to branch and equalities within branches are a perpetual topic of interest, so we will describe them briefly.

In examining relations among organizations of associated labor we see that pay is not the same for the same job and the same amount and quality of work. The facts alarmingly alert us that a stable hierarchy of branches is being established according to the level of total income (in addition to net personal incomes, it also includes indirect benefits such as funds received to purchase housing). At the top, without any sort of fluctuation, are the producers of petroleum and gas (not including workers in petroleum refineries). The ladder is not so stable at the bottom: now one group, now another group of producers are here (producers of finished textile products, workers in the crafts and trades, those who sell bread, fruit and vegetables, asbestos producers, grape-growers, and so on), but here again it is the rule that the "bottom" is mainly occupied by the same producers.

#### The Top and the Bottom

Some people might feel that inequalities cannot be measured by looking at extremes. So we will compare the five branches at the top and the five at the bottom (see the table).

Average Incomes of Workers in Groups of Five Branches (average for the economy = 1.00)

	1977	1978	1979	1980	1981
1. Five branches at top of the ladder	1.43	1.38	1.40	1.47	1.49
2. Five branches at bottom of the ladder	0.96	0.97	0.96	0.89	0.87
3. Ratio of the maximum to the minimum	1.49	1.42	1.46	1.65	1.71

The conclusion is unambiguous: the inequalities are spreading. We also see how. The five branches at the top are steadily rising, and the five branches at the bottom are slowly but "surely" dropping down further.

There is another calculation we can make from these figures. In 1981 a worker conventionally classified as unskilled earned 15,463 dinars of total monthly earnings in petroleum and gas production. At the same time in retail fruit and vegetable trade he earned only 6,484 dinars. The difference is 8,979 dinars. When that monthly difference is projected over an entire working life (let us take a full working life of 40 years), then the petroleum workers earn 4.31 million dinars more than the fruit and vegetable tradesmen (in 1981 prices and income, of course). That is an enormous sum and represents true wealth which someone will realize, and others will simply miss out on it.

It would be normal for there to be no differences from one activity to the other. The principle "the same personal earnings for the same work" is a principle governing distribution according to work. If that principle is not fulfilled, there is exploitation. There is no need to go into special explanations that this is an altogether unacceptable fact for a self-managed society.

The other side of the coin is what happens within organizations of associated labor. Here collective attitudes of egalitarianism are operative (they also have certain sources of their own in social relations). And here the principle that is supposed to prevail is "unequal personal incomes for unequal work." Under the pressure of egalitarian views there will be a distortion of the scale of evaluation to the detriment of the skilled workers. Income differentials within organizations are inelastic and by and large invariable. The consequences are manifold. If an organization lacks personnel with a particular background, it has a hard time recruiting them and it will have a hard time keeping them if they are attracted by better earnings elsewhere. Organizations of associated labor will not be able to make optimum decisions on acquiring and utilizing the most precious resource--personnel. Though there is a certain mobility of workers toward better-paid jobs, it has still been seriously hampered by ratios of this kind in production. Thus workers are not employed where they might and should be on the basis of their work skills and other abilities, and thus they are not creating the product which they might create. The refusal of young specialists to take employment in the smaller towns (in the "provinces") is a particular problem. Certainly no kind of moralizing will help to resolve the problem.

#### According to Work

What, then, is left of distribution according to work? Very little, almost nothing. Also, instead of socialization of capital, which is immanent to self-managing socialism, we have in practice the tendency of group-owner behavior. That, too, is contrary to the constitution. Why is it happening?

First, we regard income as the basic category in distribution. However, income is not solely the result of work; it also depends on administrative price controls, on economic policy measures, on the size and modernity of capital

assets (technology), on competition, on the availability of natural resources, and on the laws of the market.

Second, in any decentralized system of decisionmaking in which the decisionmakers strive to maximize benefits to themselves, the means of production are not mere physical conditions of production, but have the characteristics of capital.

Since in any present-day economy (including our own) there is a differing ratio between labor and capital from branch to branch, unequal relations are established between labor and income. If in these technically given relations organizations of associated labor are granted the "sovereign right" to make decisions about distribution of income, we have legalized group ownership, since we have made it possible to appropriate income not only on the basis of labor, but also on the basis of possession of the means of production (which ought to be the property of society at large).

All of this occurs because we take income as the base. Were we to renounce income and to take net income as the base, which is done by this year's resolution, nothing essential would be changed except quantitative relationships in distribution would undergo minimal change. (Certain newspaper commentators have referred to this small change of a quantitative nature as a transition from self-management to participation, which is in any case an exaggeration.) We should refrain both from net income and also from income, and only that would be essentially in conformity with the constitution. If, that is, the constitution is interpreted as a whole, funds for personal and community consumption of the workers cannot be in direct and lawful proportion to the amount of income or indeed net income earned. The income of an organization is only the global framework within which the parts are distributed for various purposes, but the absolute size of income is no measure to be applied to that distribution. The constitution has set forth in Article 19 that workers shall distribute for their total consumption a portion of the income which they have created through their labor and by investing assets owned by society and representing the past labor of the workers. The system of distribution that is now functioning, then, is based either on income or on net income, contrary to the constitution, and it should be reformed.

Our self-managing society needs distribution according to work, and not according to income. That means that at least approximately the same personal income would be realized for the same contribution of work regardless of the line of business or organization of associated labor. The trade union, as the broadest class organization of the workers, ought to initiate and elaborate a system of distribution according to work and not concern itself with false dilemmas (income or net income) and should not invest its energy in defending a system which every worker sees to be neither socialistic nor productive.

#### The Labor Market

Equality of personal income for an equal quantity and quality of work would be realized by a labor market, which is not institutionally recognized in our country, though it is operative. That equality is at the same time a prerequisite of development. Distribution according to work in no case contradicts

the distribution that would be accomplished by unhindered laws of the market, as some people think.

In Yugoslav practice, however, there is a lack of the equalizing role of the market in the remuneration of labor. The labor market is in operation, but its operation is imperfect and distorted, since it is not institutionally recognized (just as other markets are not recognized). If it did not deny the labor market, the trade union would be on the side of the workers and would be solving real problems with legal instruments. And there are a large number of those real problems. The exodus from worker occupations would be resolved not by market allocation, but by the coercive (government) allocation through the system of education. Since the functioning of the labor market is hampered considerably, the group behavior of organizations of associated labor has closed the door to the young generation, to a better-quality, more capable and cheaper resource. Failure to honor the labor market has deformed the pay structure between branches to the extreme and has created a rigid pay structure within the organization. Failure to give the labor market institutional recognition and the nonmarket criteria that prevail in evaluation of work services are detracting from worker mobility and guiding them in only one direction (from rural areas to the city and from there abroad), rather than in all directions.

It is certain that contemporary markets are regulated markets, and that also applies to the labor market. The worker trade unions are a traditional regulatory institution of markets. Yet our trade union has been shut out of that function. It shut itself out because of the prevailing dogmas. The trade union is now supporting the absolutization and mystification of income, adhering to the rules (by analogy with the old Latin saying): "Let there be income, though the world go to ruin." We need not wonder, then, why extreme individualism and egoism are not merely excesses and why we are entering into an ever deeper crisis in the conduct of economic activity with no need whatsoever.

7045  
CSO: 2800/216

YUGOSLAVIA

**DATA ON USE OF SOVIET CREDITS TO IMPORT EQUIPMENT**

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 28 Mar 83 pp 23-24

[Text] The question, which is not new in any respect, runs this way: Is it going to happen once again that we build large power engineering projects predominantly or exclusively with imported supplies and equipment and thereby leave the domestic industry (above all the industry producing equipment) without employment on its own market? As things now stand, that can realistically be anticipated. Yet there is an ever greater difficulty in understanding how it is possible to expect, or even to ask, of domestic industry (in this case equipment manufacturers) to create conditions with their exports both for their own reproduction and to pay off debts from which it itself has not had any benefit whatsoever, nor did it even participate in the arrangements to take those loans.

Current practice promises that imports of goods to meet the needs of expensive projects, above all in the fuel and power industry, will continue to be sizable and that the borrower will continue to remain anonymous, in spite of the most recent commitments in official economic policies to the effect that we have to know for every debt who spent the money and who is to return it. The position of the Yugoslav equipment industry is by and large clear: it is willing to assume all future obligations concerning foreign exchange if they are the consequence of a joint arrangement between the principal who needs the foreign exchange for one reason or another and the equipment producers themselves. It should be said, however, that this offer lacks for the present a basic material prerequisite: the main reason for borrowing abroad by taking credit is not that the domestic industry would be unable to offer satisfactory process engineering and the various pieces of equipment, but the fact that the nonexistence of domestic capital is made up for as a practical matter by importing equipment.

The main issue, then, is opening up space for linking up the interests of the economy on the unified Yugoslav market. Since if for Macedonia it is truly a strategic question to build a thermoelectric power plant with a capacity of 210 MW (Bitola 4) that still does not mean that the power equipment industry located in the other republics might not under certain terms and conditions deliver most of the equipment for that power plant. The fact that that has not been the case up to now is the last reason for a possible lack of interest on the part of that industry to enter into such an arrangement (it opens up to

it room to import on the basis of foreign credit only that portion of equipment or assemblies which for one reason or another is unable to make itself, and that in turn also signifies a greater opportunity to export itself). But the republic exchange balances and rounded-off republic flows of money and capital (governed more as a practical matter by social than by development goals) are the main obstacle. At the moment there is the additional problem of the inability of the commercial banking industry to finance any sort of long-term arrangements, but even if that were not the case--the banks would not be able to rally around any project if it lay outside the sociopolitical community of the respective bank. But talks have not been gotten under way on these topics, as is demonstrated, incidentally, by the example to be described below.

#### Credits and Benefits

The Government of the USSR and the Federal Executive Council concluded on 29 May 1981 an Agreement on Economic and Technical Cooperation Concerning Construction and Reconstruction of Industrial and Other Projects in Yugoslavia. That agreement called for \$450 million in credit to be extended to Yugoslav borrowers so that they might pay for purchases of equipment and machines in the Soviet Union. The credit was granted for 10 years, at an interest of 4 percent per annum, and repayment was to begin 2 years after expiration of the year in which the equipment was delivered. The right to use this credit expires in 1985. A list of projects to be financed with the credit was drawn up along with the agreement.

#### Projects Being Financed With Soviet Credit

<u>Projects</u>	<u>Millions of Dollars</u>
Fuel and power industry:	
"Tuzla-Velika" TE [thermoelectric power plant], capacity 500 MW	120.0
"Ugljevik 2" TE, capacity 300 MW	45.0
"KOVIN-1" TE, capacity 210 MW	40.0
"Bitola 4" TE, capacity 210 MW	30.0
"Trbovlje" TE-TO [heat and power plant], capacity 180 MW	30.0
Nonferrous metallurgy:	
"Suplja Stijena" Lead and Zinc Mine and Flotation Installation	8.0
"Trepca" Mining, Metallurgical and Chemical Combine	25.0
"Blagodat" Lead and Zinc Mine and Flotation Installation--Vranje	3.5
"Zajaca" Mining and Metallurgical Combine	14.5
"Zorka" Chemical Combine--Sabac	13.0
"Vares" Lead and Zinc Mine and Flotation Installation	7.0
Nickel factory in Pristina	22.0
"Boris Kidric" Light Metal Factory--Sibenik	50.0
Geological explorations:	
Geological explorations for petroleum and gas ("Naftagas"--Novi Sad)	7.0
Building materials industry:	
Cement plant with a capacity of 600,000 tons of cement	20.0
Factory to make glass insulators--Arandjelovac	15.0

Almost a full year after conclusion of the agreement with the Soviet government a law on the use of Soviet credit was adopted which stated among other things that the ultimate users would make payments as they come due in dinars, but also that no arrangement to import Soviet equipment could be realized without proof (issued by the Federal Committee for Energy and Industry) that the domestic equipment manufacturing industry had been involved to a maximum in the construction or reconstruction. (The parameters and criteria as to what involvement of the domestic industry means were also set forth in the relevant document.) Then contracts for importing equipment from the USSR were to be subject to consent of the Federal Secretariat for Finance.

The lessons to be drawn from the law on use of Soviet credit are quite clear: facilitate additional accumulation and technology which our industry still lacks by importing equipment and machines, but also open up broad room for involvement of the Yugoslav equipment industry not only to employ capacities, but also in mastering new power engineering units and devices in which it has an interest and capability. Our equipment industry has in the entire arrangement had a particular interest in the fuel and power industry as much because of the certainty that we will be doing a large amount of construction in this sector as because of the fact that building power engineering projects in the country provides it a reference for going on to the export market. It is therefore understandable that the equipment industry is trying to arrive at the first arrangements (agreements) with the Yugoslav electric power industry. The Community of the Electric Power Industry (YUGEL) and the Community of Equipment Producers (YUMEL) agreed on the text of an agreement on the bases of long-range business and technical collaboration with one another back in April 1980, and they set September 1981 as the final date for discussion in associated labor. As is stated in a document delivered to the Economic Chamber of Yugoslavia, no essential objections to the proposed text have so far come in from associated labor, but neither has the document been adopted as yet.

The self-management procedure for mutual reconciliation of interests in associated labor is burdened above all by slowness, but in the case of relations between the electric power industry and the equipment industry this obviously is not the main reason. It is interesting that a similar agreement between these two trading partners existed during the last 5-year period, and in that connection it is still more interesting that its signing occurred immediately after the federal administration promised preferential duties on equipment imported for those projects which would be the subject matter of an agreement between the electric power industry and the domestic equipment industry. The preference promised on that occasion was not forthcoming (perhaps because somehow at just about that time there was an explosion in the importation of equipment: between 1977 and 1982 imports totaled \$16.5 billion, nearly a third of which is not installed yet), and that eliminated the sole motivation which the investors had in involving the domestic industry. The possibility of obtaining additional capital by involving domestic equipment simply does not exist, and that is why investors are turning to foreign suppliers of equipment, that is, to foreign creditors.

## What Stands Behind the Silence

Of the 16 investors whose projects are to be partially financed with the Soviet credit, only one so far has sought verification of contracts concluded with the Soviet trading partners. However, this does not mean at all that there are no such contracts; the worst alternative would be that they really did not exist, since the deadline for taking over the equipment is the end of 1985.

At present, however, no one is presenting information as to how the financial circle is to be closed concerning the projects based on Soviet credit. The equipment industry is showing the greatest unrest over this; according to the formulas defined by the Federation, it is supposed to be a significant partner with the investors. The equipment producers sounded the first major alarm back in June 1981, when at their initiative a meeting was arranged with representatives of the electric power industry in the Economic Chamber of Yugoslavia. Even at that time assertions were made that the investors were evading them, and the then chairman of the chamber spelled out resolutions to the effect that not a single arrangement could be concluded with the Soviet equipment suppliers before the investors and the Yugoslav equipment manufacturers reached specific agreement on the share of domestic equipment in each individual project. It was resolved on that occasion that the trading partners would jointly raise the question of credit to finance the marketing of our equipment. There were a number of other specific resolutions which are now said not to have been joint resolutions, but rather imposed by the equipment industry through its representatives.

Pressure from the equipment industry is again being exerted these days. For a long time an attempt was made to persuade the Federal Chamber to organize a meeting between equipment producers and investors once again. The chamber did make a promise that the meeting might be held on 6 April, but no one is any longer certain about promises which on several occasions have not been kept. The reason why the chamber is not quick to respond to the initiative of one segment of the economy is probably above all in the circumstance that objectively the meeting cannot have any great importance. Neither of the partners sees the Soviet credit as any particular chance for development, nor could it have an essential effect on the basic supposition of joint participation. The lack of the preferential duties on imported equipment and the lack of solutions for credit to finance the marketing of domestic equipment represent two of the several possible elements which have faced the investors with a choice which they could not objectively get around. After all, if the investor's overriding interest is to let a contract and have the project completed by the deadline, at the lowest cost and on acceptable credit terms and conditions, then those circumstances have to be honored and must be foreseen even in the basic solutions. The very law which imposes mandatory involvement of domestic machinebuilding, but without the material foundation for something of that kind, is rather becoming a stumbling block in relations between two segments of the economy, in this case the electric power industry and the equipment industry. The problem lies in the relations established at the organizational level immediately above the economy. Persistent efforts to offer grounds for mutual conflicts between branches of the economy or individual organizations

of associated labor instead of a talk about the main topics will not bring about a resolution, so that all the blame for the lack of benefit is being conveyed in the pat phrase about the unwillingness of associated labor to reach agreement. Every effort to reach agreement is based on the individual interests of the principals, but at present the interests in establishing ties are either one-sided or neither side has an interest. As soon as every investor is objectively placed in a position where the involvement of the domestic equipment industry is of benefit to him, he will find a way for every foreign credit to be put at the service of the domestic industry's development. That is not the case at present.

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